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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,947	12/26/2001	Hsuan-Yin Lan-Hargest	12938-003002	8464
27890	7590	11/01/2005	EXAMINER	
STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			ZUCKER, PAUL A	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/025,947

Applicant(s)

LAN-HARGEST ET AL.

Examiner

Paul A. Zucker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8,12,13,16,17,22,25,26,80-94,96,97 and 99-103 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,12,13,16,17,22,25,26,80-94,96,97 and 99-103 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All . b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Current Status***

1. This action is responsive to Applicants' amendment of 5 August 2005.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 1-5, 7, 8, 12, 13, 16, 17, 22, 25, 26, 80-94, 96, 97 and 99-103 are pending.
4. In response to Applicants' request for clarification, the Examiner points out that the rejection under 112 at issue was correctly referred to in the last Office Action mailed 10 May 2005 as paragraph 6 of the Office Action mailed 22 November 2004
5. The rejection under 35 USC § 102 set forth in paragraph 9 of the previous Office Action mailed 10 May 2005 is withdrawn in response to Applicants' amendment and remarks.
6. The objection to the specification set forth in paragraph 12 of the previous Office Action mailed 10 May 2005 is withdrawn in response to Applicants' amendment.
7. The rejections under 35 USC § 112, second paragraph, set forth in paragraph 13 of the previous Office Action mailed 10 May 2005 in response to Applicants' amendment.
8. The rejection under 35 USC § 102 set forth in paragraph 14 of the previous Office Action mailed 10 May 2005 are withdrawn in response to Applicants' amendment and remarks.

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***New Rejections***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-5, 7, 8, 12, 13, 16, 17, 22, 25, 26, 80-94, 96, 97 and 99-103 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for making compounds in which the variable group  $Y^2$  is  $-CH_2-$  or a bond, does not reasonably provide enablement for making compounds in which the variable group  $Y^2$  is  $-CH_2-$  or a bond. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue."

These factors include, but are not limited to:

- a. the breadth of the claims: In the instant case the claims are extremely broad encompassing the production of a large number of organic acids;

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- b. the nature of the invention: The instantly claimed invention involves compounds which are generally considered to be unstable relative to fragments and gaseous  $X_2=C=X_1$
- c. the state of the prior art: the state of the prior art in synthesis is generally considered high but would not allow one to make the unstable compounds instantly claimed;
- e. the amount of direction provided by the inventor: The inventor provides direction for the production of compounds in which  $Y^2$  connects to the group  $-C(X_1)X_2H$  via a heteroatom such as nitrogen or oxygen;
- f. the existence of working examples: The only working examples provided are directed to the production of compounds in which  $Y^2$  is a bond or  $CH_2$ . There are no examples in which  $Y^2$  connects to the group  $-C(X_1)X_2H$  via a heteroatom .

Compounds in which  $Y^2$  connects to the group  $-C(X_1)X_2H$  via a heteroatom are known to be inherently unstable and will decompose, under normal conditions, in the following manner :  $-Y^2 C(X_1)X_2H \rightarrow -Y^2H + X_2=C=X_1$  (gas). Based upon the analysis above, the Examiner concludes that undue experimentation is required to make and use the claimed invention since the formation of these compounds is not enabled neither is their use.

***Claim Rejections - 35 USC § 102***

10. Claims 1-5, 22, and 102 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakane et al (US 4,663,336 05-1987). Nakane discloses (Column 55, lines 17-32, Example 62) the compound 4-cyclohexylbutanoic acid and its synthesis. Nakane therefore anticipates claims 1-5, 91-94 and 102.
11. Claims 91-94 and 99 are rejected under 35 U.S.C. 102(b) as being anticipated by Wittig et al (Berichte, 1939, 72B, pages 1387-1398, Abstract/Summary). Wittig discloses (Abstract, page 2, lines 9-11) the synthesis compound 2-cyano-9-phenyl-2,4,6,8-nontetrenoic acid by hydrolysis of the corresponding methyl ester. This compound is present as a mixture of esters which presumably includes the all *trans* compound.

***Conclusion***

12. Claims 1-5, 7, 8, 12, 13, 16, 17, 22, 25, 26, 80-94, 96, 97 and 99-103 are pending.  
Claims 1-5, 7, 8, 12, 13, 16, 17, 22, 25, 26, 80-94, 96, 97 and 99-103 are rejected.

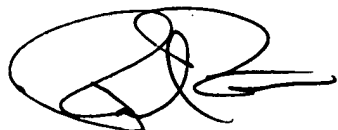
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'P. Zucker', with a stylized flourish at the end.

PAULA A. ZUCKER, PH.D.  
PRIMARY EXAMINER